

Notice of Allowability

Application No.

09/688,851

Examiner

Georgia L. Helmer

Applicant(s)

STAUB ET AL.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of 21 June 2004.
2. ☒ The allowed claim(s) is/are 24-26 and 32.
3. ☒ The drawings filed on 16 October 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 31 August 2004 + Aug
7. ☒ Examiner's Amendment/Comment Sept 10, 04
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in telephone interviews with Tom McBride on 31 August and 10 September 2004.

2. In the claims:

Cancel claims 1-23, 27-31 and 33-35.

Replace claims 24, 25 and 26 with:

Claim 24. A method for performing multiple rounds of plastid transformations in a plant cell plastid using the same selectable marker for selection of transplastomic plants comprising:

(a) introducing into a plant cell a first recombinant DNA sequence comprising a construct capable of being integrated into the plastid genome of the plant cell, said construct comprising an expression cassette comprising a DNA sequence of interest to be expressed in the plastid and a selectable marker cassette comprising a promoter that initiates expression of an operably linked DNA sequence in a plant plastid, a DNA sequence encoding a protein that permits for the selection of a transformed plastid and a 3' transcription termination region, said selectable marker cassette flanked by a pair of compatible recombining sites arranged in parallel orientation as direct repeats, to produce a plant cell having a plastid containing said first recombinant DNA sequence;

(b) selecting for the cell containing a transformed plastid;

(c) providing a recombinase compatible to said pair of compatible recombining sites to said plant cell to permit excision of said DNA sequence encoding a protein that permits for the selection of a transformed plastid and producing excision of said DNA sequence;

(d) regenerating a transplastomic plant containing said first recombinant DNA sequence without said DNA sequence encoding a protein that permits for the selection of a transformed plastid from said plant cell;

(e) introducing into a plant cell of said transplastomic plant a second recombinant DNA sequence comprising a construct capable of being integrated into the plastid genome of the plant cell, said construct comprising a second expression cassette comprising a second DNA sequence of interest to be expressed in said plastid and a second selectable marker cassette comprising a promoter that initiates expression of an operably linked DNA sequence in a plant plastid, a DNA sequence encoding the same protein as in the first recombinant DNA sequence that permits for the selection of a transformed plastid and a 3' transcription termination region, into a plant cell of said transplastomic plant obtained from said regenerated plant thereby producing a plastid having said second recombinant DNA sequence in said plant cell of said transplastomic plant; and

(f) producing a transplastomic plant having said first and second recombinant DNA sequences introduced sequentially into said plastid using the same selectable marker for the second recombinant DNA sequence as used for the selection of the first recombinant DNA sequence.

25. The method according to Claim 24, wherein said recombinase is provided to said plant cell by introducing a third recombinant DNA sequence comprising in an operably coupled 5' to 3' manner:

a transcriptional initiation region, a plastid targeting region, and a nucleic acid sequence encoding recombinase.

Art Unit: 1638

26. The method according to Claim 24, wherein said DNA sequence of interest in said first or second expression cassette provides for herbicide resistance to said plant cell.

Replace claim 32 with:

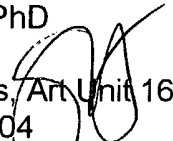
32. The method according to Claim 24, wherein said pair of compatible recombining sites is selected from the group consisting of Lox, FRT and R.

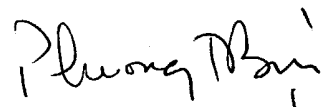
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 571-272-0796. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Georgia Helmer PhD
Patent Examiner
Transgenic Plants, Art Unit 1638
11 September 2004




PHUONG T. BUI
PRIMARY EXAMINER
9/17/04